

OAK SEEDLING OUTPLANTING PERFORMANCE

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Outplanting performance is often examined through direct growth and survival measures. Additionally, a seedling's success relative to its competitors, its competitive capacity, can be quantitatively expressed as the probability that a planted tree will attain dominance among competitors after a specified period. These dominance probabilities encompass traditional growth and survival measures while further integrating the planted tree's initial characteristics, and characteristics of competitors together with the planted tree's growing environment. The growing environment includes site quality and environmental changes resulting from silvicultural practices such as weeding and thinning before and after planting. We define competitive capacity as "a tree's ability to survive and grow at a rate sufficient to attain and maintain dominance among its competitors." This talk examined the concept and application of competitive capacity as applied to outplanted 2-0 northern red oak (*Quercus rubra* L.) seedlings. Oak planting by methods similar to those described in these examples may provide viable silvicultural alternatives for maintaining oaks on sites where oaks are threatened through species displacement or where they are now absent.

Additional information on these methods can be found at:

1. Science Paper: www.srs.fs.fed.us/pubs/4719
2. A Technical Transfer "How To" Article: www.srs.fs.fed.us/pubs/6543
3. Interactive OAKUS Program: www.ncrs.fs.fed.us/OAKUS/